REMARKS

As for the status of the present application, Claims 1-20 are pending in this application. Reconsideration of this application is respectfully requested. It is respectfully submitted that this response does not require further searching on the part of the Examiner. It is also respectfully submitted that this response places this application in condition for allowance, or in any event, places it is better condition for consideration on appeal.

Claims 1-20 were rejected under 35 U.S.C. § 102(e) as being anticipated by US Patent No. 6,407,761 issued to Ching et al. The Examiner repeated the rejections made in the previous Office Action.

In an effort to help the Examiner better understand the present invention and what is taught by the Ching et al. patent, please consider the following discussion.

Both the Ching et al. patent and the present specification disclose "Chinese Boxes" – objects which are sets within sets within sets. The Ching et al. patent describes a process for *opening the boxes* to get what you want. The present application describes a process for *displaying a symbol* to tell you where your item is in the boxes without the need to open the boxes.

Both the Ching et al. system and the present invention require one to examine the sets ("open the boxes") to find where things are. But there is *no disclosure or suggestion whatsoever* in the Ching et al. patent regarding how to get to an item without "walking the tree" to it each time. The present application describes how the item fits in the structure *without the need to* "walk the tree" each time.

Enclosed herewith are two illustrations (A and B) which indicate the fundamental difference between the operation of the Ching et al. patent and the present invention.

Both the Ching et al. patent and the present invention start with a standard "tree-view" graphical interface found in a many computer applications. The present invention uses a Windows tree-view, Ching et al. use the tree-view in SAP (an accounting program). There is nothing special about representing sets of items in a "hierarchical" tree-view. A standard example is a bill of materials in which a Car (root) contains various parts (engine, chassis, etc.) which contain subparts (engine contains distributor, which contains rotor, etc.). The common idea in this approach is that by selecting one "branch" one gets all the "leaves" on the branch (e.g., if you select an engine, you get the distributor, spark plugs, etc.)

Ching et al. is applying this common hierarchical tree-view approach to object oriented programming. Ching et al. state that Objects contains Methods which contain Parameters which contain Fields (Ching et al. Fig. 8). So, you can use this graphic approach to select the object you want, then open the tree-view to select the method you want to use, and then customized the parameters. The Ching et al. patent uses the tree-view to select or deselect (exclude) *one* node and then generate code for that node. The Ching et al. patent only contemplates at most *four* levels in his tree structure.

The present invention, on the other hand, allows for selection of multiple items. It uses the tree-view to display the status of selection at each node in the hierarchy, not just the selected node. The present invention uses the tree-view to *display* the status of a selection of a complex set of items from a larger set. The Ching et al. patent provides no insight how to do this. Further, the present invention is not restricted to four levels, but can have as many levels as one desires.

Presented below are some basic differences between the present invention and the teachings of the Ching et al. patent:

- Ching et al. use the graphical interface solely to *select* something, not to display the *status* of the selection in relation all other items in the hierarchy;

- Ching et al. deals with object-oriented programming. In object-oriented programming, the data is already stored in a hierarchical form. In the present invention, the date need not be – and usually is not – stored in a hierarchical form. Our invention discloses a method for selecting and excluding complex sets with the separate step of representing the result in a treeview. Ching et al. use the treeview to select objects already hierarchically organized. The present invention uses the treeview as one way to represent graphically an independent selection process.

- In the Ching et al. patent, making the selection becomes a means to generate code for the selected item, whereas in the present invention making a selection is a means to identify the relationship between the selection and other items in the hierarchy.

- The Ching et al. process involves selecting *one* node at a time from the tree, not making and displaying multiple selections with multiple sibling, as the present invention does.

- The Ching et al. patent uses only two attributes for each graphical icon, select and deselect, whereas out invention has eight attributes for each icon.

- For the Ching et al. patent, deselecting a branch deselects all items in the branch, whereas in the present invention, one can have a "selection-below" even if the parent branch is deselected;

- The Ching et al. patent does not have the concept of "All except"; their invention requires selecting and deselecting each item individually, whereas the present invention allows deselecting of subsets;

- The Ching et al. invention does not use recursive tree walking at all to identify the status of parent or sibling nodes because their invention has no interest in displaying the status of a selection in relation to the other selections in the tree.

- The Ching et al. invention requires expanding the entire tree to determine whether a child node is selected, whereas the present invention allows determining the status by examining the selection icon for each node individually.

Fundamentally, it is respectfully submitted that the Examiner has confused the tree-view – a graphical representation – with the selection process. Basically, Ching et al. uses the tree-view as a method of selecting or deselecting an item that is already organized hierarchically.

The present invention stores the status of selection in complex nested sets, but these need not be represented in a hierarchical form. In fact, in the present invention, they are stored in a relational database. The present invention then maps the status of selection to a tree view.

It is respectfully submitted that the following paragraphs discuss areas where the Examiner has misunderstood the present invention or has engaged in improper "hindsight reconstruction."

The Examiner has argued that "Ching discloses an apparatus for selecting or excluding *and identifying the manner of selecting and excluding* complex sets of objects contained in a set of such objects." It is respectfully submitted that Ching et al. does not disclose any such method. The Ching et al. patent only discloses the manner of selecting objects in a tree (see Abstract, 3rd sentence; Col. 2, 50-65; Col. 6, 60-65). There is nothing that changes the status of the selection icon to show deselection at a lower node.

The Examiner has argued that "Ching also discloses a patent node, one or more sibling nodes and one or more child nodes, *along with an indication of whether the representation constitutes a full or partial partition of the set that is represented* (Col. 6, ln. 30-50)." It is respectfully submitted that this is pure hindsight reconstruction. Nothing in the Ching et al. patent teaches how to represent the status of selection at each node in the tree view. Figure 9 of the Ching et al. patent, on which the Examiner relies, is a simplistic method for using selecting and deselecting only at each node which only uses one icon indicating whether selection or deselection has occurred (906.) Nothing in the Ching et al. patent changes the icon to show the status of selection or deselection in relation to other related sets or provides any teaching how to do so. Figure 9 of the Ching et al. patent should be compared with the more robust Fig. 4 in the present application. The present application discloses that as each node is selected, the invention stores the status of the selection independent of its graphical representation in the tree. The present invention then *maps* the status of a selection to a graphical icon in the tree-*view* that *displays* the result of the selection. Ching et al. use the tree structure for the simple task of selection and deselection. The present invention allows selected or deselected independent of the tree view, creates a status code to represent the impact of the selection on related nodes (which Ching et al. do not) and then maps the status code to a graphical icon that displays the status of selection at the node (which Ching et al. do not). Nothing in Ching et al. do patent provides any teaching regarding how to do this.

The Examiner has argued that "[Ching et al.] Figure 10 discloses a structure with patent, child and sibling nodes and *the checked boxes determine whether there is full or partial partition of the set that is represented.*" It is respectfully submitted that this is simply not true. Nothing in the Ching et al. patent shows full or partial partition. That is the Examiner's reconstruction of what the Examiner thinks the graphical image means. There is no process in Ching et al. patent or the icons he uses to disclose that information. In the present invention, however, the icons do display that information. Our invention embodies the process of

identifying the status of full or partial partition. Moreover, unlike Ching et al., the present invention does not need to "open the entire tree" to see the results.

The Examiner has argued that Ching also discloses "storing a status state of selection *or exclusion* of each node to represent the status state of selection *or exclusion* of the node (column 7, ln. 53-63)." It is respectfully submitted that this is incorrect. There is nothing disclosed in the Ching et al. patent regarding displaying the status of anything. Moreover, the Ching et al. patent solely refers to the manner of selecting an item. There is nothing about showing the status of *excluding* anything. What sense would it make to select an object and "exclude" one of its methods? In programming, to "exclude" is the same as "not used," so there is no point in showing an "exclusion." In the present invention, an exclusion is a critical idea. As shown on the attached illustrations, the present invention can show the set "France excluding Societe," for example, whereas Ching et al. cannot.

The Examiner has argued that "Ching also discloses a means for changing the status state of nodes in a tree-like graphical presentation of the nodes." It is respectfully submitted that Ching et al. only discloses whether an item was selected. He does not disclose the status of selection in relation to other parent or child nodes. It is respectfully submitted that this argument by the Examiner amounts to pure hindsight reconstruction.

With the above in mind, and with regard to Claim 1, it is respectfully submitted that the specifically claimed structure recited therein is not disclosed or suggested by the Ching et al. patent. It is respectfully submitted that the Examiner has extended the teachings of the Ching et al. patent beyond its express scope using hindsight reconstruction in order to reject the present invention.

With regard to Claim 1, the Examiner has recited the elements therein and has identified portions of the Ching et al. patent that purportedly disclose them. However, in view of the previous discussion, it is respectfully submitted that the specifically claimed structure is not disclosed by the passages cited by the Examiner. It is respectfully submitted that the Examiner has extended the teachings of the Ching et al. patent beyond its express scope using hindsight reconstruction in order to reject the present invention. The Examiner has generally stated that the various claimed aspects of the present invention are disclosed in the cited passages of the Ching et al. patent, but a detailed reading of the passages reveals that the specific detailed aspects of the present invention are clearly not disclosed by the Ching et al. patent.

The Examiner stated that column 2, lines 51-59 of the Ching et al. patent discloses "apparatus for selecting or excluding and identifying the manner of selecting and excluding complex sets of objects contained in a set of such objects" and that Fig. 10 illustrates this in a tree-like graphical form. Column 2, lines 51-59 states "A graphical user interface is provided which displays all of the business objects available to the system in a menu-driven format. The user selects the business object whose interface needs to be customized. Upon this selection, a comprehensive list of methods which are available to the business object is displayed. The user then selects the particular method which needs to be used by the application program under

development. Upon selection of the method, a comprehensive list of parameters which are available to that business object are then displayed."

While column 2, lines 51-59 and Fig. 10 appears to describe a graphical user interface wherein items are displayed for selection, there is no disclosure or suggestion in this cited portion of the Ching et al. patent, or any other part thereof, that the graphical user interface provides a mechanism for "identifying the manner of selecting and excluding complex sets of objects contained in a set of such objects." The present specification states on page 6, that "In order to facilitate the process of selection, the present invention provides a process for designating how nodes are selected or excluded by assigning to each node an attribute list. This attribute list designates certain aspects of a node's current state and manner of selection." and "In the preferred implementation of the present invention, a series of graphic icons are associated with each node to designate the node status. FIG. 3 illustrates these status icons. This set of icons is a preferred aspect of the present invention. For convenience of reference in the discussion that follows, a number is used to designate each status, although other designations may be employed if sufficient to constitute a unique reference."

Thus, while the graphical user interface shown in Fig. 10 of the Ching et al. patent may provide a means for selecting or excluding business objects, it is abundantly clear that the Ching et al. patent does not disclose or suggest anything regarding "identifying the manner of selecting and excluding complex sets of objects contained in a set of such objects" as this is envisioned by the present invention. The Ching et al. graphical user interface provides check boxes along with various text edit boxes 1014, 1018 that allow a user to input text values, and a box 1020 that allows the user to enter a directory 1020 in which a configuration file is stored.

As was mentioned above, it is respectfully submitted that the Ching et al. patent only discloses the manner of selecting objects in a tree (see Abstract, 3rd sentence; Col. 2, 50-65; Col. 6, 60-65). There is nothing that changes the status of the selection icon to show deselection at a lower node.

Thus, it is respectfully submitted that none of the selection boxes contained in the Ching et al. graphical user interface provides for apparatus for "identifying the manner of selecting and excluding complex sets of objects contained in a set of such objects" as is presently claimed.

Claim 1 calls for "an input data memory for storing an identification of each node independent of its order, and for identifying each node in relation to other nodes in the hierarchy by storing references, if any, to a parent node, one or more sibling nodes and one or more child nodes, along with an indication of whether the representation constitutes a full or partial partition of the set that is represented, and for storing a status state of the selection or exclusion of each node to represent the status state of selection or exclusion of the node."

The examiner cited column 4, lines 40-49 the Ching et al. patent as disclosing the input data memory for storing a mapping from objects in a set of objects from which a complex set is to be selected to a set of nodes organized in a tree-like structure that represents an ordering of the objects. While the Ching et al. patent appears to disclose a graphical user interface

apparently having nodes organized in a tree-like structure, it is respectfully submitted that the fully-claimed structure recited in Claim 1 is not present. This is abundantly clear, since the Examiner did not cite any reference for the balance of the above-quoted claim element. It is respectfully submitted that any assertion by the Examiner that the Ching et al. patent discloses this aspect of the present invention is mere conjecture and amounts to hindsight reconstruction.

It is respectfully submitted that the Ching et al. patent does not disclose or suggest anything regarding apparatus for "storing references, if any, to a parent node, one or more sibling nodes and one or more child nodes, along with an indication of whether the representation constitutes a full or partial partition of the set that is represented, and for storing a status state of the selection or exclusion of each node to represent the status state of selection or exclusion of the node." However, the Examiner cited column 6, lines 30-50 of the Ching et al. patent as disclosing a parent node, one or more sibling nodes and one or more child nodes, along with an indication of whether the representation constitutes a full or partial partition of the set that is represented.

Column 6, lines 30-50 states that "FIG. 9 is a flowchart depicting the overall operation of the invention. First, the hierarchical data structure is extracted 902 from the metadata which can be done by searching through the metadata for the appropriate information. It is then mapped 904 to the graphical icons. The graphical icons are generated by a graphic generator which creates the image on a visual display, through which the graphical icons are provided to the user. Then, the user selects 906 the graphical icon of the particular method which he wants to customize. All the graphical icons representing the parameters which are available to that method icon are then displayed 908. The user then selects 910 the graphical icon of the particular parameter which he wants to customize. Likewise, all the graphical icons representing the fields which are available to that parameter are then displayed 912. The user then selects 914 the graphical icon of the particular field for which a value is to be defined and inputs 916 the value for that field. Depending on whether the customization is complete 918, the user can then begin the process again until all customization of the various methods has been completed, at which point, a configuration is saved 918 to file."

It is respectfully submitted that the Examiner has extended the express teachings of the Ching et al. patent in order to reject the present invention, and has attributed certain aspects of the present invention to the Ching et al. teaching without having any specific recitation of the claimed aspects. For example, a detailed review of the Ching et al. patent reveals that it does not recite the terms "partition" or anything regarding storing an indication of whether the representation constitutes a full or partial partition of the set, or storing a status state of the selection or exclusion of each node to represent the status state of selection or exclusion of the node. It is again respectfully submitted that any assertion by the Examiner that the Ching et al. patent discloses these aspects of the present invention is mere conjecture and amounts to hindsight reconstruction.

An important aspect of the present invention is that it allows a user to see the manner of selection and exclusion of complex sets without expanding the tree. The Ching et al. software requires a user to expand the tree to make selections, but does not disclose the manner of selection or exclusion. The present invention need not be represented in a tree structure, although this is a "preferred embodiment" and is the easiest to understand.

As is recited in Claim 1, the present invention includes "an input memory data for storing identification of each node independent of its order, and for identifying each node in relation to other nodes in the hierarchy by storing references, if any, to a parent node, one or more sibling nodes and one or more child nodes, along with an indication of whether the representation constitutes a full or partial partition of the set that is represented, and for storing the status state of the selection or exclusion of the node."

There is nothing disclosed or suggested in the Ching et al. patent regarding any of this. Nothing is disclosed or suggested in the Ching et al. patent that identifies the status of selection or exclusion of a node as part of a set -- it only discloses a means of selecting a node. The Ching et al. patent does not disclose at all whether nodes are excluded as opposed to merely not selected. The Ching et al. patent does not disclose any way in which the manner of representing the selection discloses the relation of the selection or exclusion to other nodes in the tree. The Ching et al. patent requires a person to expand the entire tree to view the status of each node. Thus, one cannot tell from viewing a parent node whether child nodes are selected without expanding the tree, whereas our invention discloses selections below a parent node without the necessity of expanding the tree.

It is respectfully submitted that the Ching et al. software uses a graphical tree structure to pick elements of a set that are then included in an object program. The graphical tree interface only shows the status of a selection at a node and requires exposing each node to determine whether it is selected or not. The present invention shows the status of selection and exclusion of nodes in the entire set as represented by the tree. The present invention also identifies at each node its status of selected, excluded, or partially selected or excluded, which the Ching et al. patent does not. The Ching et al. patent focuses on selecting at each node. The present invention is about demonstrating the results of selecting for the entire set.

In view of the above, it is respectfully submitted that the Ching et al. patent does not disclose or suggest the invention recited in Claim 1, and certainly not without the use of hindsight reconstruction. Accordingly, withdrawal of the Examiner's rejection and allowance of Claim 1 are respectfully requested.

With specific regard to dependent Claims 9 and 11, it is respectfully submitted that the Ching et al. patent discloses nothing whatsoever regarding recursive evaluation as is performed in accordance with these Claims. The terms "recursive" and "recursive evaluation" are not used in the Ching et al. patent. It is respectfully submitted that any assertion to the contrary by the Examiner is mere conjecture and amounts to hindsight reconstruction.

Dependent Claims 2-12 are considered patentable based upon the allowability of Claim 1 from which they depend. Therefore, it is respectfully submitted that the invention recited in Claims 2-12 are not disclosed or suggested by the Ching et al. patent. Withdrawal of the Examiner's rejection and allowance of Claims 2-12 are respectfully requested.

Independent method Claim 13 contains limitations that generally correspond to the apparatus limitations recited in Claim 1. Accordingly, it is respectfully submitted that the Ching et al. patent does not disclose or suggest the invention recited in Claim 13 for the reasons argued with regard to Claim 1. Furthermore, it is respectfully submitted that the Ching et al. patent does not disclose or suggest the invention recited in Claim 13 without using hindsight reconstruction. Accordingly, withdrawal of the Examiner's rejection and allowance of Claim 13 are respectfully requested.

Dependent Claims 19 and 20 contain limitations that generally correspond to the apparatus limitations recited in Claims 9 and 11. It is respectfully submitted that the Ching et al. patent discloses nothing whatsoever regarding recursive evaluation as is performed in accordance with Claims 9 and 11. The terms "recursive" and "recursive evaluation" are not used in the Ching et al. patent. It is respectfully submitted that any assertion to the contrary by the Examiner is mere conjecture and amounts to hindsight reconstruction.

Dependent Claims 14-20 are considered patentable based upon the allowability of Claim 13 from which they depend. Therefore, it is respectfully submitted that the invention recited in Claims 14-20 are not disclosed or suggested by the Ching et al. patent. Withdrawal of the Examiner's rejection and allowance of Claims 14-20 are respectfully requested.

The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure to the extent indicated by the Examiner.

In view of the above, it is respectfully submitted that the present application is in condition for allowance. Reconsideration and such allowance are earnestly solicited. It is again respectfully submitted that this response does not require further searching by the Examiner, and places this application in condition for allowance, or in any event, places it is better condition for consideration on appeal.

Respectfully submitted,

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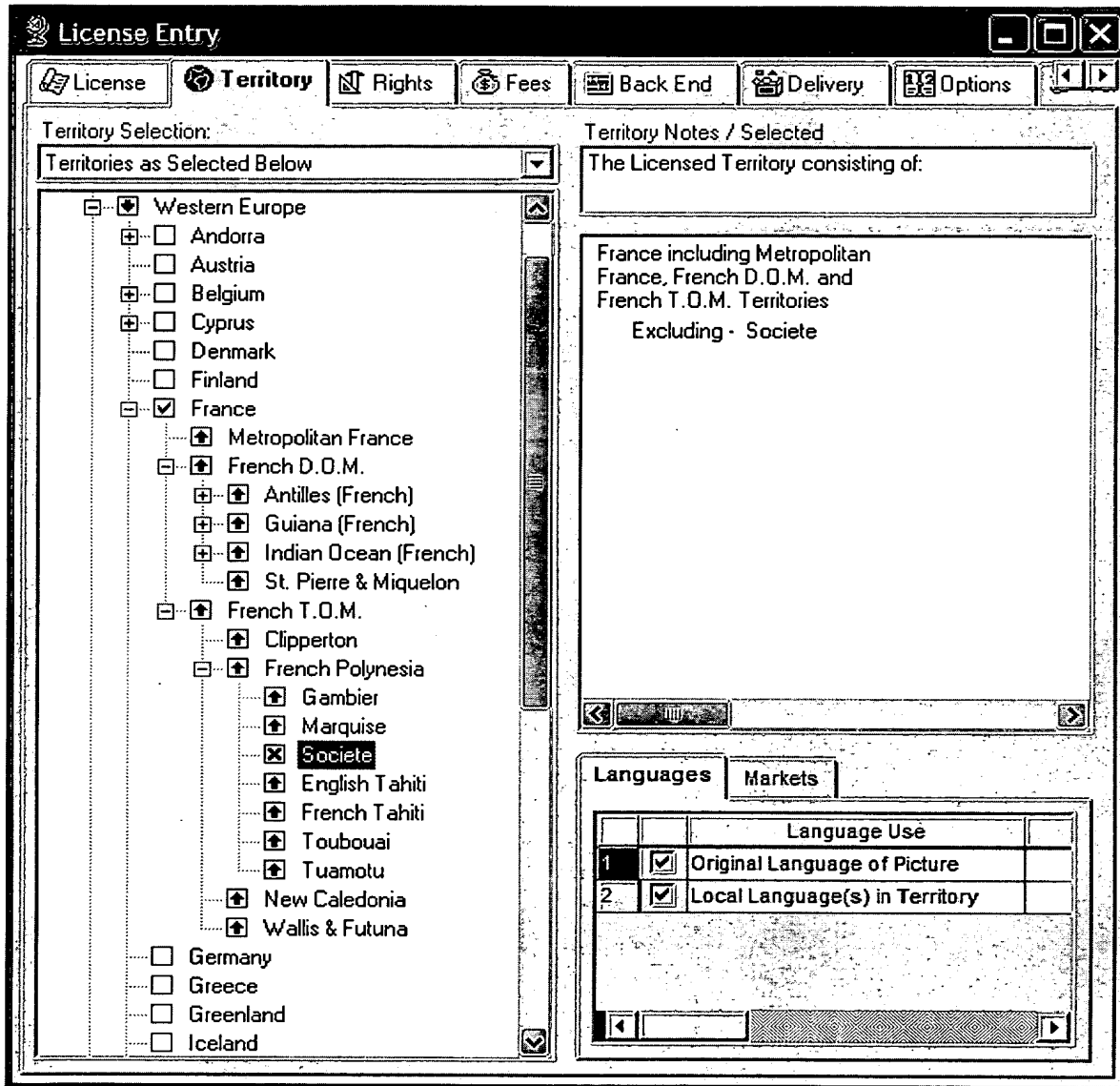
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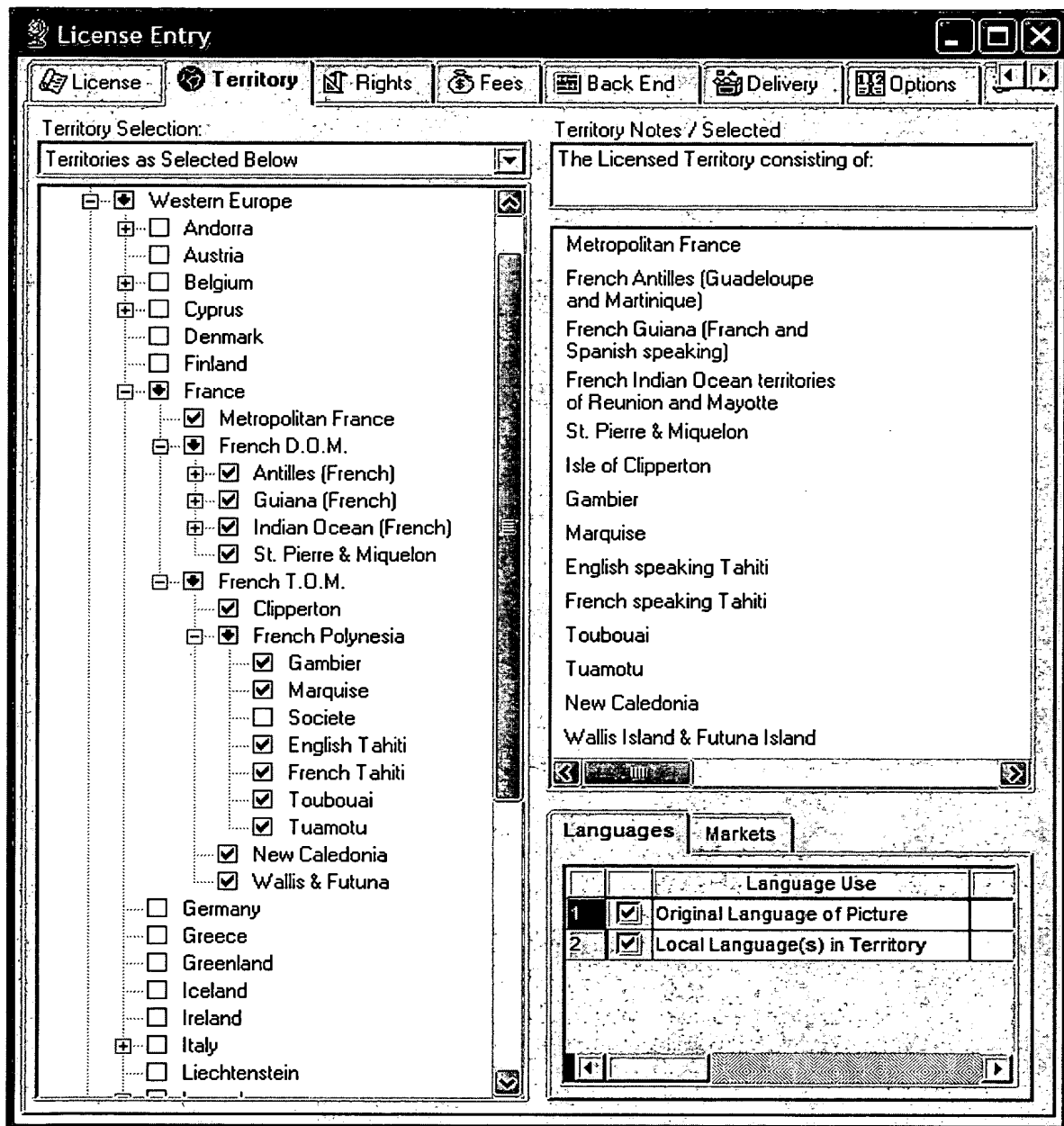# Illustration A

How the present invention operates

this illustration shows the selection: *France excluding Societe*. This requires only two clicks – one on France, one on Societe. Each icon displays the status of selection at each point.

Ching et al. *cannot* do this.

Illustration B

How the Ching et al. invention operates

License Entry

License | Territory | Rights | Fees | Back End | Delivery | Options

Territory Selection:

Territories as Selected Below

- ⊟ ⬦ Western Europe
  - ⊞ ☐ Andorra
  - ☐ Austria
  - ⊞ ☐ Belgium
  - ⊞ ☐ Cyprus
  - ☐ Denmark
  - ☐ Finland
  - ⊟ ⬦ France
    - ☑ Metropolitan France
    - ⊟ ⬦ French D.O.M.
      - ⊞ ☑ Antilles (French)
      - ⊞ ☑ Guiana (French)
      - ⊞ ☑ Indian Ocean (French)
      - ☑ St. Pierre & Miquelon
    - ⊟ ⬦ French T.O.M.
      - ☑ Clipperton
      - ⊟ ⬦ French Polynesia
        - ☑ Gambier
        - ☑ Marquise
        - ☐ Societe
        - ☑ English Tahiti
        - ☑ French Tahiti
        - ☑ Toubouai
        - ☑ Tuamotu
      - ☑ New Caledonia
      - ☑ Wallis & Futuna
  - ☐ Germany
  - ☐ Greece
  - ☐ Greenland
  - ☐ Iceland
  - ☐ Ireland
  - ⊞ ☐ Italy
  - ☐ Liechtenstein

Territory Notes / Selected

The Licensed Territory consisting of:

Metropolitan France

French Antilles (Guadeloupe and Martinique)

French Guiana (Franch and Spanish speaking)

French Indian Ocean territories of Reunion and Mayotte

St. Pierre & Miquelon

Isle of Clipperton

Gambier

Marquise

English speaking Tahiti

French speaking Tahiti

Toubouai

Tuamotu

New Caledonia

Wallis Island & Futuna Island

Languages | Markets

		Language Use	
1	☑	Original Language of Picture	
2	☑	Local Language(s) in Territory	

Here is what Ching et al. would need to do to select *France excluding Societe.*

First, the Ching et al. procedure requires a select/deselect at each node requiring *15* clicks not 2.

Second, the Ching et al. selection does *not* show the actual selected set "France excluding Societe.". Instead, Ching et al. requires a list of each component selected.